REMARKS

Claims 10 and 11 have been examined and claims 12-15 are added herein. Accordingly, claims 10-15 are pending in the application. Reexamination and reconsideration of all outstanding rejections and objections is requested.

Claims 10 and 11 are rejected under 35 U.S.C. §102(e) as being anticipated by Lipscomb.

Amended claim 10 recites software that when executed is operable to display one of a plurality of secondary spatial images on a client computer coupled to a network environment. The secondary spatial images are components of a multi-dimensional image, having more than two-dimensions. An indicated location in the two-dimensional spatial image is specified by values of first and second coordinates. The location of the indicated location in the multi-dimensional image is specified by the first and second coordinates and by at least one predefined additional coordinate.

The software is operable to read, at a server computer coupled to the network environment, a secondary image map having entries correlating to the values of the first, second, and additional coordinates where each entry in the secondary image map includes a pointer value to access a selected entry specified by first, second, and additional coordinates specifying the value of the indicated location.

The software when executed is operable to utilize a retrieved selected pointer to access hot program actions associated with the particular location in the original multi-dimensional image.

The reference Lipscomb et al. generates and displays hotlinks in a three-dimensional panoramic scene. The mechanics of the three-dimensional scene are depicted in detail in the Chen patent, US Patent No. 5,396,583 (attached hereto) cited in Lipscomb at (2:7). As depicted in Chen at Fig. 2 and described at (6:21-30), a two-dimensional panoramic view is wrapped around a cylinder (Fig. 3). Different views are projected from a viewpoint in the center of the cylinder.

As depicted in Lipscomb at Fig. 2 and described at (4:10-35) the cylindrical environmental map is a two dimensional rectangle with pixels characterized by row and column indices. The system described in Chen and Lipscomb allows a user to rotate and see different parts of the panoramic two-dimensional scene wrapped around the cylinder to create an illusion of three-dimensional space. However, there is no volume information inside or outside of the two-dimensional representation.

A second, smaller rectangular array (Fig. 3) is a hotlink array and there is a mapping between the cylindrical environmental map and the hotlink array. (5:1-25). A color value is stored in pixels of the hotlink array to indicate whether associated pixels in the cylindrical environmental map are included in the hotlink. (5:35). The value of a red color held in a hotlink pixel indexes a table of actions. (6:14-24).

The examiner states that Lipscomb teaches a primary map as the "cylindrical environment map" and a secondary image map as the "hotlink environment map" and that the first coordinate is taught as the "x coordinate" and is read from the column range index, and the second coordinate is the "y coordinate" and is read from the row index. The additional coordinate is the red color value of the pixel at the "x-y" coordinate to identify the hotlink area.

This rejection is respectfully traversed for the following reasons. As described above, in the system recited in claim 10 a two-dimensional secondary image is displayed. This two-dimensional secondary image is component, e.g., a slice of a three-dimensional volumetric image or a frame in a video clip, of a multi-dimensional image having more than two dimensions. The position of a selected location in the two-dimensional image is indicated by values of first and second coordinates and the position of the indicated location in the multi-dimensional image is indicated by the first, second, and an additional coordinate.

As described in the specification at page 3, the multi-dimensional image could be a medical anatomy volume image, for example a three-dimensional view of an embryo, with each location in the three-dimensional volume image specified by x,y,z coordinates. A particular slice of the three-dimensional image, for example a slice taken at z=fixed value, would be a two-dimensional image. That two-dimensional could be displayed and an indicated location in the two-dimensional image specified by x,y coordinates. However, because in this example all locations in the displayed two-dimensional image have the same value of the z coordinate, i.e., z=fixed value, the position of the indicated location in the three-dimensional image is specified by the x, y coordinates in the two dimensional image and the additional coordinate of z=fixed value.

These three coordinates, in this example, can then be used to index the secondary image map having an entry for each location in the multi-dimensional image. The secondary map allows "hot data" to be associated with each location in the 3-dimensional image.

In contrast, there is no multi-dimensional image, having more than two dimensions, described in Lipscomb. That system allows different views of a two-dimensional panoramic scene

to be generated from different view points. Hot data is associated with pixels in the two-dimensional environmental map using a hot link array.

The two-dimensional hot link array stores color values at each pixel indicating whether the pixel is part of a hot spot and indexing a program action associated with a hot spot in the two-dimensional array.

The color value is not an additional coordinate value that, in combination with first and second coordinate values, indicates the position of a selected location in a multi-dimensional image having more than two dimensions. In Lipscomb there are only two dimensions, specified by x,y. The color value is not a coordinate but an index to a program action and corresponds to the entries in the secondary image map of claim 10. There is no relation between the color value stored in the hot link array and a coordinate in a multi-dimensional image having more than two dimensions.

Lipscomb operates in a way similar to the system described in U.S. Patent No. 4,847,604 cited in the specification at page 2. It is known in the art to link "hot data" to a two-dimensional image displayed on a computer screen.

Accordingly, Lipscomb does not fairly teach or suggest the claimed feature of utilizing first, second, and additional coordinates, indicating the position of a selected location in a multi-dimensional image, to index an entry in a secondary image corresponding to the position of the indicated location in the multi-dimensional image having more than two dimensions.

There is no teaching in Lipscomb of indexing "hot data" to an indicated location in a three (or more) dimensional image displayed on a two-dimensional component of the multi-dimensional image. Accordingly, Lipscomb does not anticipate the invention recited in claim 10 and therefore claim 10 is allowable.

Claim 11 recites similar limitations and is thus allowable for the same reasons. The remaining claims depend on claims 10 and 11 and are allowable for the same reasons and are also further allowable because additional limitations are recited.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (925) 944-3320.

Respectfully submitted,

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